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TITLE : COOLING METHOD FOR FURNACE SHELL

ABSTRACT : PURPOSE: To cool furnace shell so as to prevent occurrence of temp. difference between inside and outside of mantle, by using cooling mediums selected from plural cooling mediums according to the conditions of the locally heated surface of the furnace mantle.

CONSTITUTION: Locally heated part of mantle is heated to various surface temp. according to the degree of wastage of fire bricks in the furnace. To cool the locally heated part, industrial water, steam, compressed air, or hot water, and various cooling medium are sprayed or sprinkled through the same cooling nozzle 10 to the shell by controlling degree of opening of flow control valves 12, 13, 14, so as not to cause suddenly large temp. difference due to cooling between inside and outside surfaces of the mantle. The cooling may also be conducted in combination of industrial water and hot water, e.g., by introducing the industrial water to one section of suitably divided cooling header pipe 9 arranged around the furnace mantle, and hot water to the sections on both sides of the section above described.

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